

Telecommunications Act of 1996 based on the incumbents' market power, and that the Commission should not redraw Congress's blueprint for promoting competition.²⁰⁹ The petitioners state that, although they cannot be compelled to do so, they will allow Verizon to collocate at their premises in certain circumstances.²¹⁰

74. Verizon recognizes that section 251(c)(6) applies to incumbent LECs, not competitive LECs, and that the Act does not require the petitioners to offer collocation at their premises.²¹¹ Verizon maintains, however, that nothing in the Act prohibits the Commission from allowing Verizon to interconnect with the petitioners at their premises.²¹² According to Verizon, fairness dictates that it have interconnection choices comparable to those available to the competitive LECs.²¹³ Verizon states that the collocation rights it requests would reduce its costs of delivering its originating traffic to the petitioners' networks.²¹⁴ Verizon argues that the petitioners should allow Verizon to collocate at their premises and otherwise help minimize Verizon's transport costs.²¹⁵

c. Discussion

75. We reject Verizon's position and proposed contract language on this issue.²¹⁶ Verizon has not suggested any provision in the Act or the Commission's rules that requires petitioners to provide collocation to Verizon. Instead, Verizon argues that fairness dictates that it have collocation choices comparable to those available to competitive LECs.²¹⁷ Verizon's collocation obligations, however, arise primarily under section 251(c)(6) of the Act, which requires incumbent LECs, but not competitive LECs, to provide collocation to other carriers.²¹⁸ Indeed, in the *Local Competition First Report and Order*, the Commission decided not to impose

²⁰⁹ AT&T Brief at 31-33; Cox Brief at 21; WorldCom Brief at 20 n.15; WorldCom Reply at 22.

²¹⁰ AT&T Brief at 33-34; Cox Brief at 21; WorldCom Brief at 20 n.15.

²¹¹ Verizon NA Brief at 19; Verizon Ex. 4 (Direct Testimony of D. Albert & P. D'Amico), at 29; Tr. at 1263-65 (testimony of Verizon witness Albert).

²¹² Verizon NA Brief at 19; Tr. at 1263-65 (testimony of Verizon witness Albert).

²¹³ Verizon NA Brief at 19.

²¹⁴ *Id.* at 19-20; Verizon NA Reply at 11-12.

²¹⁵ Verizon NA Reply at 11-12.

²¹⁶ See Verizon's November Proposed Agreement to AT&T, §§ 4.2.2.3, 13.5; Verizon's November Proposed Agreement to Cox, §§ 4.3.4 (to the extent it addresses collocation), 4.3.5, 13.10; Verizon's November Proposed Agreement to WorldCom, Part C, Interconnection Attach., §§ 2.1.3.3-2.1.3.4.

²¹⁷ Verizon NA Brief at 19.

²¹⁸ See *Verizon Pennsylvania Order*, 16 FCC Rcd at 17475, para. 102 (stating that the 1996 Act does not impose a collocation obligation on non-incumbents); Verizon NA Brief at 19.

reciprocal section 251(c)(2) interconnection obligations on non-incumbents.²¹⁹ It also determined that a state commission's imposition of section 251(c) obligations on non-incumbents would be inconsistent with the Act.²²⁰ Thus Commission precedent explicitly forecloses our imposition of collocation obligations on petitioners pursuant to section 251(c)(6).

76. We recognize that the Commission has required certain LECs, including Verizon, to provide virtual collocation pursuant to other provisions of the Act, including section 201.²²¹ In requiring virtual collocation, however, the Commission specifically declined to impose reciprocal obligations on other carriers.²²² Finally, we recognize that petitioners voluntarily offer to allow Verizon to collocate equipment in some circumstances;²²³ Verizon is thus not without options in this respect.

4. Issue I-4 (End Office Trunking)

a. Introduction

77. Asserting the need to avoid tandem exhaustion, Verizon seeks to include language requiring AT&T and Cox to establish direct trunks to a Verizon end office when either petitioner exchanges traffic volumes corresponding to a DS-1 level of traffic with a particular end office.²²⁴ AT&T and Cox oppose the inclusion of this language, arguing that they may establish any technically feasible point of interconnection with Verizon, including at Verizon tandem switches, and that Verizon's language essentially would require them to establish additional points of interconnection. Verizon also seeks to include language capping at 240 the total number of interconnection trunks WorldCom may establish with any Verizon tandem switch. WorldCom opposes the inclusion of this language on the grounds that it is arbitrary and, as acknowledged by Verizon's own witness, superfluous in light of WorldCom's agreement to establish end office

²¹⁹ *Local Competition First Report and Order*, 11 FCC Rcd at 15613, para. 220.

²²⁰ *Id.*, 11 FCC Rcd at 16109-10, paras. 1247-48; 47 C.F.R. § 51.223(a) (prohibiting state commissions from imposing incumbent LEC obligations, including collocation, on competitive LECs); *cf. New York Commission AT&T Arbitration Order* (rejecting Verizon request for right to collocate in AT&T premises).

²²¹ *Expanded Interconnection with Local Telephone Facilities*, 9 FCC Rcd 5154, 5161-62, paras. 16-20 (1994) (*Virtual Collocation Order*), remanded for consideration of 1996 Act *sub nom. Pacific Bell v. FCC*, 81 F.3d 1147 (D.C. Cir. 1996).

²²² *Virtual Collocation Order*, 9 FCC Rcd at 5184, para. 105.

²²³ AT&T Brief at 31-34; Cox Brief at 21; WorldCom Reply at 22.

²²⁴ DS-x is a hierarchy of digital data rates used to classify the capacities of digital lines and trunks, as well as a designation of standard electrical interfaces corresponding to those digital data rates. A DS-0 is equivalent to 64 Kbps, the data rate generally used to digitally encode a single two-way voice conversation. In North America, a DS-1 data rate corresponds to approximately 1.5 Mbps, or 24 DS-0 channels. A DS-3 corresponds to approximately 45 Mbps, equivalent to 28 DS-1s or 672 DS-0 channels. See Harry Newton, *Newton's Telecom Dictionary*, 16th Ed. at 292-93 (2000).

trunking when the DS-1 threshold is reached. WorldCom and Verizon also disagree about how to implement the direct trunking agreement to which they have agreed in principle. We reject the language Verizon proposes to AT&T and Cox and the 240 trunks per-tandem limitation that it proposes to WorldCom. However, we adopt Verizon's language implementing its agreement with WorldCom regarding the DS-1 threshold.

b. Positions of the Parties

78. AT&T argues that Verizon's proposed end office trunking requirement violates AT&T's section 251(c)(2) right to select a point of interconnection at any technically feasible point.²²⁵ According to AT&T, technical feasibility is the sole limitation that section 251(c)(2) places on its selection of points of interconnection. Furthermore, AT&T states that the Commission's rules expressly acknowledge that interconnection at a tandem switch meets the standard of technical feasibility.²²⁶ AT&T argues that Verizon has not provided the "clear and convincing evidence" of "specific and adverse impacts" that the *Local Competition First Report and Order* requires for Verizon to refuse AT&T's requested interconnection.²²⁷ AT&T states that, even if Verizon incurs costs to remedy the exhaustion of tandem switches as a result of interconnecting with competitive LECs, such costs do not, in and of themselves, constitute the "significant adverse impact" that the Commission requires for an incumbent to refuse a requested means of interconnection.²²⁸

79. AT&T also argues that Verizon's proposal is unnecessary to alleviate tandem exhaustion. AT&T states that approximately 50 percent of its local interconnection trunk groups are already direct end office trunks, and cooperative trunk rearrangements and forecasting should allow Verizon to provision sufficient trunking and tandem switching to meet future demand.²²⁹ AT&T further argues that Verizon could address its tandem exhaustion concerns by employing direct one-way trunks to send its traffic to AT&T's switch.²³⁰ AT&T adds that Verizon provides insufficient evidence that competitive LEC interconnection at tandem switches is causing tandem exhaustion; it further notes that Verizon presents no evidence of its efforts to minimize tandem exhaustion.²³¹

²²⁵ See AT&T Brief at 25-26, citing 47 U.S.C. § 251(c)(2).

²²⁶ See AT&T Brief at 26, citing 47 C.F.R. § 51.305(a)(2)(iii) (designating tandem switch trunk ports as technically feasible points of interconnection).

²²⁷ See AT&T Brief at 26-27, citing *Local Competition First Report and Order*, 11 FCC Rcd at 15605-06, para. 203.

²²⁸ See AT&T Brief at 27-28.

²²⁹ See AT&T Reply at 11.

²³⁰ See *id.* at 10.

²³¹ See AT&T Brief at 27-28, AT&T Reply at 9.

80. AT&T states that, even if some direct-trunking threshold were permissible, Verizon provides no documentation or engineering study to support setting a threshold at the DS-1 level, or to demonstrate its own use of this threshold as an engineering guideline.²³² AT&T argues that Verizon's witness acknowledged that Verizon itself uses a different internal threshold for direct end office trunking.²³³ In any case, AT&T argues, there is no requirement that competitive LECs follow the same engineering guidelines as Verizon for interconnection.²³⁴ Furthermore, AT&T states that Verizon does not apply its proposed end office trunking threshold uniformly. For example, Verizon does not subject exchange access customers to such a limitation on tandem interconnection.²³⁵ In addition, AT&T argues that, unlike incumbents with more mature networks, competitive LECs experience traffic patterns that are "spiky" in nature, making it unreasonable to apply a threshold of one DS-1 level of traffic reached at any time.²³⁶ In fact, according to AT&T, the building blocks of competitive LECs' networks are not DS-1s; rather they are higher capacity facilities, such as DS-3 or in some cases even SONET OC-48. Accordingly, AT&T argues that requiring it to implement end office trunking at a DS-1 threshold would be inefficient and inconsistent with AT&T's network design.²³⁷

81. Cox makes similar arguments to those advanced by AT&T. It argues that Verizon is required to provide interconnection at any technically feasible point and that the Commission has specifically included tandem switches among those points.²³⁸ Cox also argues that the Commission has specifically held that a competitive LEC may have a single point of interconnection in a LATA if it so chooses.²³⁹ Cox argues that, far from showing that interconnection at tandem switches is technically infeasible, Verizon's testimony shows the opposite, demonstrating that Verizon augments existing tandems and adds new tandem switches to address concerns of tandem exhaustion.²⁴⁰ Cox notes that Verizon can defray its costs for remedying tandem exhaustion with the substantial revenues it receives from competitive LECs for the use of Verizon's tandem switching capabilities.²⁴¹ Like AT&T, Cox argues that Verizon's

²³² See AT&T Brief at 28.

²³³ See *id.* at 28-29, citing Tr. at 2366-67 (Verizon looks at trunk group performance over a three-month period to determine whether trunking capacity is insufficient).

²³⁴ See AT&T Reply at 10-11.

²³⁵ See AT&T Brief at 30.

²³⁶ See *id.* at 28-29.

²³⁷ See AT&T Brief at 29.

²³⁸ See Cox Brief at 23.

²³⁹ See *id.*

²⁴⁰ See *id.* at 23-24, citing Tr. at 1102-03, 1283-86 (describing Verizon's process of addressing tandem exhaustion, and indicating that Verizon East has installed 24 tandems over the last 5 years).

²⁴¹ See Cox Brief at 23-24.

testimony shows that it does not intend to apply this threshold uniformly to all carriers interconnecting at Verizon's tandem switches, but only to competitive LECs, even though commercial mobile radio service (CMRS) providers, other incumbent LECs, and IXC's collectively account for nearly twice as many tandem trunks as do competitive LECs.²⁴² Cox further argues that Verizon has offered no basis for the DS-1 threshold at which it seeks to require direct end office trunking.²⁴³ Cox adds that Verizon's "hair-trigger" threshold would require direct end office trunking even if the level of traffic increased as a result of a single, one-time event or "spike."²⁴⁴

82. Although Cox states that it cannot be required to establish direct end office trunking, as a compromise Cox has agreed to language that would require it to establish direct end office trunks when its traffic exceeds the level of three DS-1s, measured over a three month period.²⁴⁵ Cox states that it normally constructs its facilities in increments of one DS-3, and that the breakeven point for the construction of a new DS-3 would normally be at the level of ten DS-1s or more -- significantly more than the "three DS-1" level it is prepared to accept.²⁴⁶ In light of these economies of scale, Cox believes that its proposal represents a fair compromise between the standards used to engineer Cox's network and the traffic level Verizon proposes.²⁴⁷

83. WorldCom argues that the Commission should reject Verizon's proposal to cap at 240 trunks (the equivalent of ten DS-1s) the number of tandem interconnection trunks WorldCom may order to any tandem switch.²⁴⁸ Verizon seeks to place this restriction solely on WorldCom.²⁴⁹ WorldCom states that Verizon's own testimony makes clear that implementation of direct end office trunks at the DS-1 threshold, to which WorldCom has agreed, along with competitive LEC forecasting of tandem usage, are adequate to address Verizon's tandem exhaustion concerns.²⁵⁰ WorldCom adds that, in addition to being unnecessary, Verizon's proposal is arbitrary in that it would apply to all tandem switches, rather than simply to those in

²⁴² See *id.* at 25-26.

²⁴³ See *id.* at 25-26.

²⁴⁴ See *id.* at 26.

²⁴⁵ See *id.* at 25-26. Cox proposes a threshold of "the CCS busy hour equivalent of three DS-1s for any three (3) months in any consecutive six (6) month period or for any consecutive three (3) months." Cox's November Proposed Agreement to Verizon, § 5.2.4.

²⁴⁶ See Cox Brief at 26.

²⁴⁷ See *id.* at 26.

²⁴⁸ See WorldCom Brief at 21.

²⁴⁹ See *id.* at 21.

²⁵⁰ See *id.* at 21-22, citing Tr. at 1436, 1439.

danger of exhaustion.²⁵¹ WorldCom further argues that the proposal is arbitrary because 240 trunks represents an insignificant amount of traffic for a tandem switch.²⁵² WorldCom adds that the proposal is discriminatory, in that Verizon only proposes to apply it to competitive LECs, and not to other users of tandem switch interconnection, such as IXC's and wireless carriers.²⁵³

84. In addition, WorldCom argues that Verizon's proposal could lead to call blockage. According to WorldCom, tandem interconnection trunks can serve as the primary route, the only route, or the final route for traffic exchanged with Verizon, depending on interconnecting carriers' points of interconnection.²⁵⁴ WorldCom argues that an arbitrary limit on the number of tandem interconnection trunks could impede WorldCom's ability to complete calls. WorldCom states that this problem is exacerbated in the case of large customers migrating to WorldCom's service, who could easily send more than ten DS-1s worth of traffic through a single Verizon tandem.²⁵⁵

85. WorldCom rejects Verizon's assertions that a competitive LEC's choice to interconnect at a single tandem switch in a LATA impairs Verizon's ability to manage capacity, and aggravates its problems with tandem exhaustion. WorldCom states that interconnecting with a single tandem switch in a LATA actually conserves tandem switching resources by minimizing the need for trunk ports across multiple tandems.²⁵⁶ WorldCom adds that, contrary to Verizon's suggestion, interconnection at a single tandem in a LATA would not evade WorldCom's contractual commitment to establish direct end office trunks upon reaching the DS-1 threshold. WorldCom adds that, even today, it has 7,944 end office trunks in Virginia.²⁵⁷

86. Verizon argues that adoption of the AT&T and Cox proposals would accelerate the exhaustion of Verizon's tandem switches in Virginia because trunk growth between competitive LECs and Verizon is driving Verizon's tandem exhaustion problem.²⁵⁸ Tandem exhaustion, in turn, increases the likelihood of both call blockage at the tandem switch and

²⁵¹ See WorldCom Brief at 22-23.

²⁵² See *id.* at 22.

²⁵³ See *id.* at 23.

²⁵⁴ See *id.* at 23-24.

²⁵⁵ See *id.* at 24. According to WorldCom, at the time it migrates a customer to its network, it has not yet developed calling statistics for that customer to identify its traffic patterns by end office. Thus, it states it has no reasonable basis upon which to engineer end office trunks pursuant to the DS-1 threshold to which WorldCom has agreed. See *id.* at 24-25.

²⁵⁶ See WorldCom Reply at 25-27.

²⁵⁷ See *id.* at 26.

²⁵⁸ See Verizon NA Brief at 26.

Verizon's resultant liability for performance penalties.²⁵⁹ Verizon argues that its proposed language would subject competitive LECs to the same engineering guidelines that Verizon applies to itself for the establishment of direct end office trunks.²⁶⁰ Verizon argues that its proposal thus satisfies its obligation to provide interconnection "at least equal in quality" to the interconnection it provides to itself.²⁶¹ Verizon further argues that AT&T and Cox misconstrue Verizon's proposal as altering the competitive LEC's selection of a point of interconnection.²⁶² According to Verizon, its proposal is not an attempt to force competitive LECs to establish points of interconnection at Verizon end offices.²⁶³ Verizon's proposal would merely require the establishment of trunk groups to an end office, which would not necessarily change the location of the point of interconnection – a point Verizon states was recognized by WorldCom's witness.²⁶⁴

87. Verizon states that, although WorldCom appears to agree in principle that direct end office trunks should be established when traffic to an end office reaches a DS-1 level, WorldCom's proposed language is too permissive and only applies to two-way trunks. Verizon argues that its own language is more comprehensive, requiring the establishment of end office trunks when a DS-1 level threshold is reached and encompassing both one- and two-way trunks.²⁶⁵ Verizon objects to WorldCom's proposed language allowing it to deliver traffic to a single Verizon tandem in a LATA. Verizon contends that this language would "play havoc" with Verizon's ability to manage capacity on its interoffice facilities, in part because it could require Verizon to switch all the traffic it exchanges with WorldCom in that LATA at one tandem.²⁶⁶ Verizon also contends that WorldCom's proposed language is inconsistent with WorldCom's agreement to route traffic in accordance with the Local Exchange Routing Guide (LERG) and to implement direct end office trunks once a DS-1 level of traffic is reached.²⁶⁷ Finally, Verizon argues that we should adopt its language limiting to 240 the number of interconnection trunks at

²⁵⁹ See *id.* at 26-27.

²⁶⁰ See *id.* at 27.

²⁶¹ See *id.* at 28, citing *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 758 (8th Cir. 1997).

²⁶² See Verizon NA Reply at 13.

²⁶³ See Verizon NA Brief at 28.

²⁶⁴ See *id.* at 28, citing Tr. at 1633.

²⁶⁵ See *id.* at 29-30.

²⁶⁶ See *id.* at 31-32.

²⁶⁷ See *id.* at 32. According to Verizon, WorldCom's proposed language allowing it to drop off all of its traffic in a LATA at one designated tandem seems to allow WorldCom to evade its commitment to establish direct end office trunks at a DS-1 level of traffic. See *id.*

a tandem switch because it would allow Verizon to manage the usage and design of trunks at the tandem, assisting Verizon in maintaining network reliability.²⁶⁸

c. Discussion

88. We reject Verizon's proposed language to AT&T and Cox requiring the establishment of direct end office trunks when traffic to a particular Verizon end office exceeds a DS-1 level.²⁶⁹ It appears that competitive LECs already have an incentive to move traffic off of tandem interconnection trunks onto direct end office trunks, as their traffic to a particular end office increases. By such direct trunking, a competitive LEC may avoid charges associated with Verizon's tandem switching. Indeed, it would appear that, just like Verizon does, competitive LECs have the incentive to move their traffic onto direct end office trunks when it will be more cost-effective than routing traffic through the Verizon tandems.²⁷⁰ The record indicates that competitive LECs already move their traffic onto direct end office trunks as their traffic volumes increase.²⁷¹ Verizon has neither alleged nor established that this incentive is insufficient to alleviate its tandem exhaustion concerns.

89. Additionally, we conclude that Verizon has not shown that competitive LECs are responsible for the exhaustion of its tandems in Virginia. The record indicates that multiple Verizon switches in Virginia have been exhausted or will face exhaustion in the near future.²⁷² In response to AT&T and Cox's objections that Verizon's end office trunking requirement would only apply to competitive LECs, Verizon indicates that competitive LEC interconnection trunks have grown at a significant rate, experiencing a 100% growth rate in the year 2000 alone.²⁷³ The record also indicates, however, that other carriers interconnected with Verizon's tandem switches contribute substantially to tandem exhaustion.²⁷⁴ Specifically, according to Cox, CMRS

²⁶⁸ See *id.* at 33.

²⁶⁹ See Verizon's November Proposed Agreement to AT&T, § 4.2.8; Verizon's November Proposed Agreement to Cox, § 5.2.4.

²⁷⁰ For instance, Verizon does not appear to argue that defects in the pricing for tandem switching or transport insulate competitive LECs from the incentives to minimize costs that Verizon operates under. Even if Verizon did raise such an argument, however, the appropriate course likely would be to adjust these prices so that the competitive LECs receive the correct economic signals, not to impose the end office trunking requirement that Verizon requests.

²⁷¹ WorldCom has agreed to establish direct trunks when its traffic to a particular Verizon end office reaches the DS-1 level. See WorldCom Brief at 21. AT&T points out that approximately 50 percent of its interconnection trunks are already direct end office trunk groups. See AT&T Reply at 11. Similarly, Cox states that it would agree to a direct trunking requirement at the level of three DS-1s. See Cox Brief at 26.

²⁷² See Tr. at 1101-02 (four Verizon tandem switches in Virginia have already exhausted and three more face exhaustion in the following three to five years).

²⁷³ See Verizon Network Architecture Brief at 26. See also Tr. at 1277; Verizon Ex. 4 (Direct Testimony of D. Albert and P. D'Amico), at 37-39.

²⁷⁴ See Cox Ex. 12 (proportion of tandem trunks from each category of carrier).

providers, other incumbent LECs, and IXC collectively account for nearly twice as many tandem trunks as do competitive LECs, yet the record does not indicate that Verizon has sought to limit the ability of any of those carriers to use Verizon's tandem switches.²⁷⁵ In the absence of further evidence that competitive LEC traffic is responsible for the exhaustion of Verizon's tandem switches – “clear and convincing evidence” that “specific and adverse impacts” would result from a competitive LEC's requested interconnection²⁷⁶ – we decline to impose a direct end office trunking requirement on AT&T and Cox. While we reject Verizon's language proposed to Cox, we find that Cox's language proposed in return is reasonable, and thus adopt it.²⁷⁷ We also note that AT&T has proposed no language of its own in this issue, and thus requires no additional action on our part.

90. Unlike AT&T and Cox, WorldCom has agreed to Verizon's DS-1 threshold. We adopt Verizon's language proposed to WorldCom implementing end office interconnection at the DS-1 threshold, rather than WorldCom's proposed language implementing the same requirement.²⁷⁸ We share Verizon's concern that WorldCom's proposed language only applies to two-way trunks. Because Verizon's proposed language measures the relevant traffic in a manner consistent with WorldCom's proposed language, but encompasses both one-way and two-way trunks, we adopt Verizon's proposed language implementing end office trunking at a DS-1 threshold.²⁷⁹ We reject Verizon's language proposed to WorldCom that would limit the number of interconnection trunks to any tandem switch to 240 trunks.²⁸⁰ Verizon's witness conceded that end office interconnection at the DS-1 threshold would get Verizon “95 percent of the way” to solving the tandem exhaustion problems in Virginia,²⁸¹ rendering the 240 tandem trunk cap superfluous.²⁸² We decline to impose this restriction on WorldCom for such a marginal and speculative benefit to Verizon when, as WorldCom contends, it appears to be over inclusive in its application and may create the risk of traffic blockage.

91. Finally, we note that Verizon's concerns regarding a single point of interconnection at one tandem office in a LATA are the subject of a pending industry-wide rulemaking proceeding.²⁸³ For the reasons previously stated, we decline to address the issues

²⁷⁵ See Cox Brief at 25-26, citing Cox Exs. 12 and 14 (direct trunking requirements of IXCs).

²⁷⁶ *Local Competition First Report and Order*, 11 FCC Rcd at 15605-06, para. 203.

²⁷⁷ See Cox's November Proposed Agreement to Verizon, § 5.2.4.

²⁷⁸ See WorldCom's November Proposed Agreement to Verizon, Attach. IV, § 4.2.2 (we note that this same section was identified as section “2.4.2” in WorldCom's November JDPL).

²⁷⁹ See Verizon's November Proposed Agreement to WorldCom, Part C, Interconnection Attach., § 2.2.4.

²⁸⁰ See Verizon's November Proposed Agreement to WorldCom, Interconnection Attach., § 2.2.5.

²⁸¹ Tr. at 1439.

²⁸² Tr. at 1436 (the DS-1 threshold and the 240 tandem trunk cap would serve as “belts and suspenders”).

²⁸³ See *Inter-carrier Compensation NPRM*, 16 FCC Rcd at 9634, 9650, paras. 72, 112.

raised in that proceeding here; instead, we decide the present petitions under the Commission's current rules. Under those rules, new entrants may request any technically feasible point of interconnection,²⁸⁴ including a single point of interconnection in a LATA.²⁸⁵ Moreover, interconnection at a single tandem office location would not contravene WorldCom's commitments in this proceeding to route traffic according to the LERG or to implement direct end office trunking at a DS-1 level of traffic. As Verizon itself argues, implementing direct end office trunks does not entail changing the location of a tandem office point of interconnection.²⁸⁶

5. Issues I-7/III-4 (Trunk Forecasting Issues)

a. Introduction

92. Verizon seeks to include language requiring AT&T and Cox to forecast both inbound traffic to, and outbound traffic from, Verizon's network. Verizon states that this forecasting information enables it to manage its network more efficiently and that it requires the assistance of competitive LECs to maintain the availability of Verizon's network for all Verizon's customers, including competitive LECs. AT&T and Cox argue that each carrier is in a better position to forecast the flow of traffic originating on its own network. We adopt Cox's proposal and, with certain modifications, we also adopt AT&T's language. Finally, while we adopt WorldCom's language, we disagree with WorldCom's argument concerning receiving its forecasted number of trunks.

b. Positions of the Parties

93. AT&T argues that each party is in the best position to manage traffic originating on its own network and, to that end, both AT&T and Verizon have agreed to deploy interconnection facilities that use one-way trunks.²⁸⁷ According to AT&T, since each party will be designing its own network, the originating party is better positioned to forecast the volume of traffic expected on the routes it has included in the design of its interconnection network. Indeed, AT&T argues that Verizon's witness conceded this point at the hearing.²⁸⁸ To address Verizon's concern that competing LEC customers with high inbound traffic requirements would skew its forecasting assumptions, AT&T offers to provide Verizon with trunk forecasts in both directions if the traffic exchanged between them is out of balance.²⁸⁹ According to AT&T, the

²⁸⁴ See 47 U.S.C. § 251(c)(2); 47 C.F.R. § 51.305(a)(2).

²⁸⁵ See *Inter-carrier Compensation NPRM*, 16 FCC Rcd at 9634, 9650, paras. 72, 112; *SWBT Texas Order* at 18390, para. 78 n.174.

²⁸⁶ See Verizon NA Brief at 28, citing Tr. at 1633.

²⁸⁷ AT&T Brief at 47.

²⁸⁸ *Id.* at 47-48, citing Tr. at 1472.

²⁸⁹ *Id.* at 48-49; AT&T Reply at 22.

New York Commission adopted its proposal, which defines traffic that is "out of balance" as traffic originating on one party's network that is greater than three times the volume of traffic originated on the other party's network. AT&T urges the Commission to adopt the same standard.²⁹⁰

94. Cox also disagrees with Verizon's proposal, arguing that Cox's language, which requires each carrier to be responsible for its own outbound forecast, is consistent with the language in every other interconnection agreement that Cox has negotiated with other incumbent LECs, including Verizon South in Virginia.²⁹¹ According to Cox, Verizon has not offered to provide any of the data Cox would need to prepare Verizon's outbound forecasts and, in the absence of such data, all Cox could do is to provide Verizon with a forecast based on trends.²⁹² Cox argues that Verizon can easily create such trending forecasts for itself.²⁹³ Moreover, Cox also contends that in addition to the historical traffic data that Cox would use to make a trend-based forecast, Verizon has crucial information regarding its outbound traffic not available to Cox (e.g., "overflow" measurements).²⁹⁴

95. According to Cox, Verizon's proposal would impose its substantial engineering costs on Cox.²⁹⁵ In addition, Cox argues that, since Verizon has indicated that it will review and modify any forecasts provided to it, there is no reason to believe that Cox's forecast of Verizon's outbound traffic would be anything more than busy work.²⁹⁶ In response to Verizon's assertion that Cox alone has access to its business plans, Cox contends that it has already agreed to provide Verizon with information concerning expected changes in Cox's traffic patterns so that Verizon will have all the data necessary to perform forecasts of its outbound traffic.²⁹⁷

²⁹⁰ AT&T Brief at 48-49, citing Case 01-C-0095, *AT&T Petition for Arbitration to Establish an Interconnection Agreement with Verizon*, Order Resolving Arbitration Issues, at 42 (issued July 30, 2001) (*New York Commission AT&T Arbitration Order*).

²⁹¹ Cox Brief at 27. Cox also argues that Verizon's proposal is inconsistent with the way in which it treats other carriers, including incumbent LECs, start-up competitive LECs, and interexchange carriers (IXCs). *Id.*, citing Tr. at 1477-79.

²⁹² According to Cox, "trends" are based entirely on previous traffic patterns. Cox Reply at 19.

²⁹³ Cox Brief at 28; Cox Reply at 20. Cox also argues that although Verizon indicated at the hearing that it might provide data interexchange carrier (DIXC) traffic information to Cox, Verizon has not modified its proposal to Cox to include that information. Cox Brief at 28 n.107.

²⁹⁴ Cox Brief at 29 (explaining that overflow measurements capture outbound traffic that exceeds the capacity of Verizon's trunk groups).

²⁹⁵ *Id.* at 27, 28 (arguing that forecasting Verizon's outbound traffic would require diversion of Cox's engineering resources that could better be used to plan and operate Cox's network).

²⁹⁶ Cox Reply at 19.

²⁹⁷ Cox Brief at 29 & n.115, citing section 10.3.2 of its proposed agreement with Verizon; Cox Reply at 19.

96. As an initial matter, WorldCom argues that Verizon's proposal does not accurately reflect the parties' agreement on forecasting and, therefore, we should adopt WorldCom's proposal.²⁹⁸ In addition, WorldCom contends that Verizon must make enough ports available to WorldCom to provision the number of trunks it forecasts and not provide ports instead to carriers that do not submit forecasts.²⁹⁹ WorldCom asserts that inadequate provisioning of trunks poses a threat to the public switched telephone network and has a disproportionately adverse impact on competing carriers because the majority of blocked traffic is inbound from incumbent LECs.³⁰⁰

97. According to Verizon, the forecasts of Verizon-originating traffic that it seeks from both Cox and AT&T are necessary for Verizon to manage its network effectively, because the growth in these trunks is "explosive and volatile."³⁰¹ Verizon contends that it would be difficult for it to attempt to predict how many calls will originate from Verizon's customers destined for AT&T and Cox, and this is information the competitive LECs have based on their own marketing and business plans.³⁰² Verizon argues that this volatile growth can occur within AT&T's proposed three-to-one ratio and AT&T's compromise is therefore inadequate in assisting Verizon to manage its network.³⁰³ Additionally, Verizon asserts that AT&T has not identified any reason why Verizon should provide it with a forecast, pursuant to its compromise proposal, when Verizon sends three times as much traffic to AT&T as AT&T sends to Verizon.³⁰⁴

98. Verizon argues that if Cox can do "trending" based on past performance, it can make reasonable estimates of future performance and this is the type of information Verizon expects to receive from the competing carriers when they forecast their inbound traffic.³⁰⁵ Contrary to Cox's suggestion that Verizon disregards the data that competing carriers provide to it, Verizon states that it combines this information with other data to ensure that Verizon has

²⁹⁸ WorldCom Reply at 38-39 (arguing that Verizon's proposal fails to address one-way trunks and WorldCom's proposed 15 percent overhead concept, and contains several concepts on which the parties have not agreed and for which Verizon failed to introduce any evidence). WorldCom also disputes Verizon's assertion that statements made by WorldCom's witness during the hearing constitute concessions to Verizon's proposal. *Id.* at 38.

²⁹⁹ WorldCom Brief at 42-43.

³⁰⁰ *Id.* at 43.

³⁰¹ Verizon Network Architecture (NA) Brief at 48-49, citing Tr. at 1537, 1549. Verizon contends that in 2000, the competing carriers' network grew 106 percent over the previous year in Virginia. *Id.* at 49.

³⁰² Verizon NA Brief at 49 (arguing that these competitive LEC plans often target Internet or telemarketing traffic originating on Verizon's network and terminating on the competitor's network).

³⁰³ *Id.* at 50.

³⁰⁴ *Id.* Verizon also argues that, unlike it, AT&T is not responsible for ensuring that it has enough facilities in place to meet the demand on its network for all carriers. *Id.*

³⁰⁵ *Id.* at 49-50, citing Tr. at 1055-56.

adequate facilities in place.³⁰⁶ Verizon also disagrees with Cox's statement that, since Verizon does not seek forecasts from start-up competing carriers, it should not receive such forecasts from established carriers.³⁰⁷ According to Verizon, whenever it enters into an interconnection agreement with any competing carrier, the competing carrier "should provide" Verizon with an initial forecast at the first joint implementation meeting.³⁰⁸

99. Verizon contends that a forecast is not a reservation procedure but, rather, is information that Verizon uses to make adequate supplies available to satisfy orders for all trunks.³⁰⁹ It therefore rejects WorldCom's argument that if WorldCom forecasts 100 trunks, it should receive a guarantee of 100 trunks. Verizon also notes that WorldCom's apparent assumption regarding utilization levels is inconsistent with the parties' already agreed-upon language. For example, Verizon states that under its proposed section 2.4.8, if WorldCom had 100 trunks, and all 100 trunks were being utilized, Verizon would augment this trunk group to reach a utilization level of 70 percent.³¹⁰

c. Discussion

100. We adopt, with some modification described below, the language proposed by AT&T, Cox and WorldCom.³¹¹ Except as set forth below, we determine that the petitioners' language generally is reasonable and that Verizon fails to establish why competitive LECs are better positioned to forecast Verizon's originating traffic or why its competitors alone should shoulder the costs of such forecasting.³¹² However, we caution AT&T and Cox not to interpret

³⁰⁶ Verizon NA Reply at 25.

³⁰⁷ *Id.*, citing Cox Brief at 27.

³⁰⁸ Verizon NA Reply at 25.

³⁰⁹ *Id.* at 26, citing Tr. at 1503-05, 1512-13.

³¹⁰ *Id.* at 27.

³¹¹ Specifically, we adopt AT&T's proposed sections 10.3.1 and 10.3.3.1, and reject Verizon's proposed sections 10.3.1 and 10.3.2.1. We adopt Cox's proposed sections 10.3.1 through 10.3.5, and reject Verizon's proposed section 10.3.2. Finally, we adopt WorldCom's proposed Attachment IV, sections 4.1.1 through 4.1.9, and 4.3 through 4.3.4, and reject Verizon's proposed sections 2.4.8 and 13.3 through 13.3.1.2. Verizon's proposed language responsive to this issue was the subject of WorldCom's motion to strike. *See* WorldCom Motion to Strike, Ex. A at 43-48. Since we adopt WorldCom's proposal in lieu of Verizon's language, its motion with respect to Issue III-4 is moot.

³¹² Although there appears to be a dispute between the parties about the meaning and effect of certain trunking-related documents generated in a New York collaborative (*see, e.g.*, AT&T Reply at 22-23 & n.81, citing Tr. at 1488; Cox Brief at 30; Verizon Network Architecture Brief at 48), we determine that we do not need to resolve this matter. Similarly, we find it unnecessary to address the disagreement about which class of carriers provide Verizon with forecasts. Even if we were to find in Verizon's favor on both of these issues (*i.e.*, that forecasting Verizon's outbound traffic is consistent with New York collaborative guidelines and that other classes of carriers provide Verizon with such forecasts), based on the record before us, we would still be persuaded that AT&T and Cox should prevail. It is undisputed, for example, that the New York collaborative document cited to by the parties expressly (continued....)

our decision as excusing a lack of close cooperation with Verizon. Rather, we expect that these carriers will benefit by providing prompt and full information to Verizon about expected changes in traffic patterns, including anticipating when those changes might disproportionately affect Verizon's outbound traffic.³¹³

(i) AT&T's Proposed Language

101. We recognize Verizon's concern regarding unforecasted spikes in growth, generated by the number and nature of a competing carrier's customers. Verizon has not persuaded us, however, that AT&T's proposal, to forecast Verizon's outbound traffic that exceeds a three-to-one traffic ratio, would fail to address satisfactorily Verizon's concerns. According to Verizon, forecasts identify growth, and spikes in this growth affect when and where Verizon must add capacity in its network.³¹⁴ While Verizon argues that the change or growth in traffic is independent of whether the traffic exchanged between the carriers is balanced, Verizon acknowledges that the biggest growth spikes occur because of Internet traffic, which tends to flow one way from Verizon's end users to a competitor's ISP customer.³¹⁵ We expect that Verizon's concern of growth spikes resulting from AT&T signing up "a lot of customers" would be addressed by triggering AT&T's requirement to provide Verizon with a forecast on an "as-needed basis."³¹⁶

102. Although we adopt AT&T's proposal, we direct the parties to make the following changes to AT&T's proposed section 10.3.3.1. First, we note that this section suggests that AT&T would forecast Verizon's outbound traffic only after the three-to-one traffic imbalance occurs. We are concerned that, as currently drafted, AT&T's proposal may afford Verizon inadequate notice within which to augment its capacity, if necessary.³¹⁷ Although the "as-needed (Continued from previous page) _____

states that the trunking forecast guidelines in no way supersede any future interconnection agreement between Verizon and individual competitive LECs. See Cox Ex. 18, at 18-8.

³¹³ Indeed, should Verizon share its DIXC data with AT&T and Cox, we encourage both carriers to consider providing more detailed information to Verizon similar to the arrangement Verizon and WorldCom have reached.

³¹⁴ Tr. at 1533.

³¹⁵ *Id.* at 1534 (stating that the "big bangers" in spikey growth are due to Internet traffic).

³¹⁶ *Id.*; AT&T's November Proposed Agreement to Verizon, § 10.3.1. We also note that when the traffic between AT&T and Verizon is balanced (or falling within the three-to-one ratio), AT&T's outbound trunk forecast, provided either semi-annually or on an "as needed basis," would permit Verizon to forecast what its outbound traffic will be. We understand that on trunking matters, there is a large amount of informal coordination and communication between the carriers so that we would expect the parties to reach agreement on what an "as-needed basis" means, rather than trying to quantify this term in this Order based upon the record before us.

³¹⁷ In a recent New York decision, the New York Commission directed AT&T to "provide Verizon its best estimates of inbound traffic in all instances when it can *reasonably expect* volumes in excess of a three to one ratio of inbound traffic to outbound traffic." *New York AT&T Arbitration Order* at 42 (emphasis added). And although AT&T's witness stated that such a solution "makes good sense," AT&T's proposed section 10.3.3.1 contains no such forward-looking language. See AT&T Ex. 15 (Rebuttal Testimony of R. Kirchberger), at 2.

basis" language would arguably apply in this instance, we find that greater certainty is appropriate. Second, we agree with Verizon that AT&T has not demonstrated the need for Verizon to submit a forecast of AT&T's outbound traffic where Verizon originates three times as much traffic as AT&T.³¹⁸ Therefore, we direct the parties to include in their compliance filing language that (1) provides that AT&T will forecast Verizon's outbound traffic as soon as AT&T *reasonably expects* traffic volumes in excess of the three-to-one ratio and that this obligation to provide forecasts of another carrier's outbound traffic lies only with AT&T and not Verizon; and (2) reflects our conclusion above about the need for Verizon to submit forecasts.

(ii) Cox's Proposed Language

103. Cox has persuaded us that it should not be required to forecast Verizon's outbound traffic. Although Verizon states that "trending" information from Cox is all that it is seeking, Verizon fails to explain why it could not simply perform this function for itself.³¹⁹ Moreover, Cox's assertions about its costs to forecast Verizon's outbound traffic have gone unchallenged as have its statements about requiring certain information from Verizon in order to prepare such a forecast.³²⁰ Verizon concedes that not all of the information requested by Cox is contained in DIXC data but fails to explain why Cox does not need all the information that it claims to need in order to create a forecast of Verizon's outbound traffic.³²¹ Verizon also does not explain the failings of Cox's proposal to inform Verizon of expected changes in Cox's traffic patterns.³²²

(iii) WorldCom's Proposed Language

104. While we adopt WorldCom's proposed sections 4.1 and 4.3 as providing a fair representation of the parties' agreement as expressed during the hearing and in filings, we note that it is unclear to us where, if at all, WorldCom's 15 percent overhead concept is incorporated in this language.³²³ Because WorldCom criticizes Verizon's proposal for not reflecting the

³¹⁸ See Verizon NA Reply at 50. Also, to the knowledge of Verizon's witness, Verizon has never signed up a customer that caused an imbalance in traffic exchanged between Verizon and a competitive carrier and that resulted in a blockage. See Tr. at 1539 (Verizon witness stating that he has never seen "a spike in actual trunk operation causing blockage that was due to a sign of something big on [Verizon's] end that was driving boatloads of calls to an individual CLEC"). Although afforded the opportunity, AT&T has not challenged this statement.

³¹⁹ Cox indicates that it performs trending by extrapolating from traffic history and that trending is just the first step in the forecasting process. Tr. at 1550, 1574.

³²⁰ See, e.g., Cox Ex. 2 (Rebuttal Testimony of F. Collins), at 39-40.

³²¹ See Tr. at 1540.

³²² See Cox's November Proposed Agreement to Verizon, § 10.3.2 (stating that Cox shall notify Verizon promptly of changes greater than ten percent to current forecasts that generate a shift in the demand curve for the following forecasting period). In addition, and presumably as an example of how section 10.3.2 would operate, Cox's witness explains that if Cox were to add an ISP as a customer, it would share that information with Verizon. Tr. at 1573.

³²³ See WorldCom's November Proposed Agreement to Verizon, Part C, Attach. IV, § 4.1. At the hearing, the parties agreed on the following example of how WorldCom's proposed 15 percent overhead would operate: if (continued...)

parties' agreement on the 15 percent overhead reached at the hearing,³²⁴ we can only assume that WorldCom continues to support this overhead provision but failed to update its contract proposal accordingly. Therefore, we direct the parties to file conforming language making clear their agreement to leave a 15 percent overhead when trunks are removed.

105. In addition, it appears that Verizon proposed language in Issues I-7/III-4 that corresponds to language proposed by WorldCom in Issue IV-2, which concerns whether mutual agreement is required for two-way trunking and what compensation is appropriate for two-way trunk facilities.³²⁵ Accordingly, we consider Verizon's non-forecasting proposals in Issue IV-2, below.³²⁶ Verizon also includes language for Issues I-7/III-4 in its November JDPL related to "joint network implementation and grooming process" and "installation, maintenance, testing and repair."³²⁷ We reject this language for several reasons. We have no record upon which to determine the reasonableness of these proposals. Verizon has offered no argument why we should adopt this language and WorldCom argues in its reply that it did not agree to these Verizon proposals.³²⁸ Moreover, we note that it appears that several of the concepts set forth in section 13.1 are addressed elsewhere in the contract.³²⁹

106. Finally, we reject WorldCom's assertion that Verizon should automatically make available whatever number of trunks WorldCom has forecasted.³³⁰ In essence, WorldCom is asking us to make its forecast binding on Verizon; however, the record is noticeably silent on WorldCom's willingness to make its forecast binding on itself and incur the consequences (*e.g.*, financial penalties) for inaccurate forecasts. As noted by Verizon, a forecast is not a reservation policy.³³¹ Verizon's witness indicated that the critical factor in deciding whether to augment

(Continued from previous page) _____

WorldCom had a trunk group of 100 trunks and the utilization rate for that group was at 60 percent, the parties agree to reduce the number of trunks in that group to 75, leaving a growth margin of 15 percent. *See* Tr. at 1500-02, 1546.

³²⁴ *See* WorldCom Reply at 39.

³²⁵ *See* Verizon's November Proposed Agreement to WorldCom, Part C, Interconnection Attach., §§ 2.4.2, 2.4.3, 2.4.9, and 2.4.10; WorldCom's November Proposed Agreement to Verizon, Attach. IV, §§ 1.8.1, 1.8.2, 1.8.7, and 1.8.8.

³²⁶ *See* Issue IV-2 *infra*.

³²⁷ *See* Verizon's November Proposed Agreement to WorldCom, Part C, Interconnection Attach., §§ 13.1 *et seq.*, 13.2.

³²⁸ *See* WorldCom Reply at 39 (also arguing that Verizon failed to introduce any evidence concerning these proposals).

³²⁹ *See, e.g.*, Verizon's November Proposed Agreement to WorldCom, Part C, Interconnection Attach., § 2.4.5; WorldCom's November Proposed Agreement to Verizon, Attach. IV, § 1.8.4 (providing the agreed-upon blocking standard).

³³⁰ *See* WorldCom Brief at 42.

³³¹ Tr. at 1513.

trunk groups is to determine if the current operational performance is consistent with the agreed-upon engineering design standards.³³² In other words, the key issue is not that WorldCom receives all of its forecasted trunks but, rather, is that Verizon augments trunk groups in sufficient numbers so that there is adequate capacity to provide the level of service to which the parties have agreed.³³³ We further note that Verizon is held to certain performance standards with respect to trunking. If Verizon does not meet these standards, at a minimum, provisions set forth in the *Bell Atlantic-GTE Merger Order* may apply in the near term.³³⁴ Therefore, Verizon has adequate incentive to ensure that its network is functioning appropriately.

6. Issues III-1/III-2/IV-1 (Tandem Transit Service)³³⁵

a. Introduction

107. AT&T and WorldCom seek to protect and solidify the transit service that they have been receiving from Verizon to ensure that they will be able to continue exchanging traffic with third-party carriers without having to interconnect directly with them. AT&T and WorldCom seek to include language requiring Verizon to provide transit over its network at TELRIC-based rates for traffic they exchange with third-party LECs.³³⁶ WorldCom also proposes language requiring Verizon to bill and compensate WorldCom for transit traffic as though the traffic were exchanged between WorldCom and Verizon.³³⁷ Verizon opposes inclusion of this

³³² Tr. at 1528-29.

³³³ Tr. at 1528.

³³⁴ See *Application of GTE Corporation and Bell Atlantic Corporation for Consent to Transfer Control of Domestic and International Sections 214 and 310 Authorizations and Applications to Transfer Control of a Submarine Cable Landing License*, 15 FCC Rcd 14032, 14334-38, Appendix D, Attach. A, paras. 8-16 (2000) (*Bell Atlantic-GTE Merger Order*). We also note that the question of applicable remedies for failure to meet specified performance standards is pending before the Virginia Commission. Earlier this year, the Virginia Commission issued an order establishing performance measurements and standards for Verizon, which includes the "percent final trunk group blockage" metric. See *Establishment of Carrier Performance Standards for Verizon Virginia Inc.*, Case No. PUC010206, Order Establishing Carrier Performance Standards with Implementation Schedule and Ongoing Procedure to Change Metrics, issued Jan. 4, 2002 (*Virginia Commission Performance Metrics and Standards Order*). See also, *Establishment of Carrier Performance Standards for Verizon Virginia Inc.*, Case No. PUC010206, Staff Motion to Establish Carrier Performance Standards for Verizon Virginia Inc. and for Order Prescribing Notice and Providing for Comment or Request Hearing, issued Oct. 10, 2001, Attach. A at 89-90 (*Virginia Commission Staff Motion on Metrics and Standards*).

³³⁵ Because these three issues present interrelated sets of contract language and disputes, we address them together. Issue III-1 concerns whether Verizon has a duty to provide transit service without regard to the level of traffic exchanged, and whether transit should be priced at TELRIC rates. Issue III-2 also concerns whether Verizon has a duty to provide transit service at TELRIC rates. Issue IV-1 concerns whether Verizon has a duty to bill and compensate WorldCom for transit traffic as though the traffic were exchanged between WorldCom and Verizon.

³³⁶ See AT&T's November Proposed Agreement to Verizon, § 7.2; WorldCom's November Proposed Agreement to Verizon, Attach. IV, § 10.

³³⁷ See WorldCom's November Proposed Agreement to Verizon, Attach. I, § 4.8.

language, arguing that it is not under any obligation to provide transit service. Verizon does, however, propose language voluntarily offering tandem transit service as an accommodation to competitive LECs.³³⁸ Under Verizon's proposed terms, the petitioners would be allowed to purchase tandem transit from Verizon at TELRIC rates up to the level of one DS-1 of traffic exchanged with another carrier. With respect to WorldCom, once transit traffic volumes reached the DS-1 threshold, Verizon's terms would allow Verizon to terminate its tandem transit service. With respect to AT&T, once transit traffic volumes reached the DS-1 threshold, Verizon's terms would require AT&T to pay additional charges for Verizon's tandem transit service during a transition period, and would allow Verizon subsequently to terminate its tandem transit service. For both petitioners, we adopt, with slight modifications, the language that Verizon proposed to AT&T.

b. Positions of the Parties

108. AT&T states that tandem transit service consists of tandem switching and common transport that AT&T would use to send local and intraLATA toll traffic between itself and LECs other than Verizon.³³⁹ AT&T argues that Verizon has a legal obligation to provide transit service to AT&T, regardless of the level of traffic. AT&T argues that Verizon's restrictions on tandem transit service above a DS-1 level of traffic unlawfully interfere with AT&T's right, pursuant to section 251(a)(1), to interconnect directly or indirectly with the facilities and equipment of other carriers.³⁴⁰ In addition, according to AT&T, Verizon's duty to interconnect pursuant to section 251(c)(2)(A) is not limited solely to interconnection for the exchange of traffic between AT&T and Verizon.³⁴¹ AT&T argues that Verizon's proposed language also restricts AT&T's ability to interconnect at the trunk interconnection ports on a tandem switch, in violation of Verizon's obligation under section 251(c)(2)(B) to provide interconnection at any technically feasible point.³⁴² Finally, AT&T contends that Verizon's proposal discriminates in violation of section 251(c)(2)(D), because it would move competitive LEC local traffic off of tandem switches, but leave interexchange carriers' (IXCs) access traffic in place.³⁴³

109. In addition to being contrary to law, AT&T argues that Verizon's restrictions on tandem transit service would be highly inefficient and harmful to AT&T. AT&T reiterates its argument made with respect to Issue I-4 that the DS-1 threshold used by Verizon to determine

³³⁸ See Verizon's November Proposed Agreement to AT&T, §§ 7.2.1-7.2.3; Verizon's November Proposed Agreement to WorldCom, Part C, Interconnection Attach., § 11.

³³⁹ See AT&T Brief at 34.

³⁴⁰ See AT&T Reply at 13; 47 U.S.C. § 251(a)(1).

³⁴¹ See AT&T Brief at 35.

³⁴² See *id.* at 35.

³⁴³ See *id.* at 37.

whether to implement direct trunking is inappropriate to apply to competitive LECs.³⁴⁴ AT&T further argues that any direct trunking arrangement displacing a tandem transit arrangement would require AT&T to negotiate and possibly arbitrate an interconnection agreement with any third-party carrier with which it seeks to exchange traffic. According to AT&T, the time and expense required to create such arrangements would be an impediment to efficient interconnection and unnecessary, given that Verizon already has such arrangements with third-party carriers.³⁴⁵ AT&T questions the validity of Verizon's concerns about competitive LEC traffic causing tandem exhaustion, given Verizon's testimony that it does not know how much competitive LEC tandem-routed traffic is transit traffic.³⁴⁶ Finally, AT&T contends that, contrary to Verizon's characterization, AT&T's witness did not testify that AT&T seeks to evade its responsibility to establish reciprocal compensation arrangements with other carriers. Rather, AT&T states that its testimony reflects the common practice among indirectly interconnected carriers of agreeing to exchange traffic on a bill and keep basis.³⁴⁷

110. Like AT&T, WorldCom argues that Verizon's restrictions on transit service would frustrate the Act's requirement in section 251(a)(1) that carriers be allowed to use indirect interconnection, which WorldCom states necessarily involves the use of a third carrier's facilities.³⁴⁸ WorldCom also echoes AT&T's arguments that Verizon's proposal discriminates between competitive LECs and other carriers, such as interexchange and wireless carriers, that interconnect at Verizon's tandem switches.³⁴⁹ WorldCom states that Verizon has not demonstrated that transit traffic contributes in any meaningful way to tandem exhaustion.³⁵⁰ WorldCom adds that Verizon's restrictions on transit service conflict with Verizon's obligation to provide UNE tandem switching, as required under section 251(c)(3) of the Act and section 51.319(c) of the Commission's rules.³⁵¹ WorldCom characterizes the provision of transit service as nothing more than the provision of tandem switching for the routing of traffic between carriers.³⁵²

³⁴⁴ See *id.* at 35-36. Under Issue I-4, AT&T argues that competitive carriers typically install new facilities operating at a higher capacity than DS-1, such as DS-3. See *id.* at 28-29; *supra*, Issue I-4.

³⁴⁵ See AT&T Brief at 36.

³⁴⁶ See *id.* at 37, citing Tr. at 2224.

³⁴⁷ See AT&T Reply at 16. See also Tr. at 2191.

³⁴⁸ See WorldCom Brief at 27.

³⁴⁹ See *id.* at 30.

³⁵⁰ See *id.* at 30.

³⁵¹ See *id.* at 27-28. See also 47 U.S.C. § 251(c)(3); 47 C.F.R. § 51.319(c).

³⁵² See WorldCom Brief at 28, citing Tr. at 2282.

111. WorldCom also argues that transit service is the most efficient form of interconnection for carriers that exchange only minimal amounts of traffic. Transit service, according to WorldCom, allows such carriers to avoid the fixed costs of an interconnection facility that would be used only minimally and the unnecessary expense of negotiating multiple interconnection arrangements.³⁵³ WorldCom adds that the issue of direct interconnection between carriers exchanging transit traffic is markedly different from the issue of implementing direct trunks to Verizon end offices upon reaching a DS-1 level of traffic, to which WorldCom has agreed. According to WorldCom, direct interconnection between carriers in lieu of transiting arrangements would require the construction of new physical interconnection facilities, whereas direct trunks to Verizon end offices are established over existing transport facilities.³⁵⁴ WorldCom states that, when it does choose to install new carrier class transport facilities, they operate at a transmission rate of OC-48, or sometimes OC-3 and OC-12, far greater than the DS-1 threshold that would apply under Verizon's proposed terms for transit traffic.³⁵⁵ WorldCom states that there is simply no carrier class transmission equipment to transport a DS-1 level of traffic any significant distance between two points.³⁵⁶ Furthermore, WorldCom states that Verizon's proposal would result in inefficiencies for the entire network, due to the number of additional trunks required of each carrier in order for it to be interconnected directly with other carriers.³⁵⁷ WorldCom argues that its proposal, by contrast, would allow all subscribers of one carrier to call all subscribers of other carriers over an efficiently constructed network via transit arrangements.³⁵⁸

112. WorldCom also argues that its language requiring Verizon to act as a billing intermediary for WorldCom's transit traffic makes efficient use of Verizon's existing billing arrangements, and is consistent with industry billing guidelines.³⁵⁹ WorldCom adds that Verizon has used such an approach for several years.³⁶⁰ WorldCom states that its proposal reduces the number of records exchanged and the number of bills to render and to audit for all carriers. WorldCom argues that its proposal requires less effort of Verizon than would be required if Verizon excluded charges for transit traffic on its bills to third-party carriers.³⁶¹ According to

³⁵³ See *id.* at 28.

³⁵⁴ See *id.* at 29.

³⁵⁵ See *id.* at 29.

³⁵⁶ See *id.* at 30.

³⁵⁷ In WorldCom's example, ten carriers interconnected via Verizon's network would require a total of ten trunks to interconnect. According to WorldCom, for the same carriers to interconnect directly with each other, 50 trunks would be required. See WorldCom Brief at 29-30.

³⁵⁸ See *id.* at 28.

³⁵⁹ See *id.* at 44.

³⁶⁰ See *id.* at 44.

³⁶¹ See *id.* at 45.

WorldCom, its approach also ensures that all carriers along the route are compensated for the portion of the call that they carry.³⁶² According to WorldCom, under its proposal the originating carrier ultimately would be liable for any compensation owed for transit traffic.³⁶³ WorldCom adds that Verizon included language in the November Decision Point List (DPL) making WorldCom a guarantor of Verizon's compensation for transit traffic from WorldCom. According WorldCom, this language belies any objections Verizon has to WorldCom's proposal.³⁶⁴

113. Verizon states that AT&T and WorldCom, like all telecommunications carriers, individually have the duty "to interconnect directly or indirectly with the facilities and equipment of other telecommunications carriers."³⁶⁵ Verizon argues that both AT&T and WorldCom attempt to turn this *duty* into a *right* against Verizon as an incumbent LEC. According to Verizon, there is no requirement that incumbent LECs help competitive LECs satisfy their own interconnection obligations, including the obligation to interconnect "indirectly" with other carriers.³⁶⁶ Instead, Verizon states that its tandem transit service is purely voluntary, and thus that its DS-1 traffic level limitation does not violate any part of section 251.³⁶⁷ Under Verizon's proposal to AT&T, once AT&T's exchange of transit traffic with any carrier exceeds a DS-1 level, Verizon would be permitted to charge for that traffic non-usage sensitive charges for trunk ports and a billing fee reflecting the charges assessed by Verizon's billing vendor.³⁶⁸ Verizon's trunking charge is a non-usage-sensitive port charge from Verizon's access tariff.³⁶⁹ Verizon's billing charge is a pass-through of the charges Verizon pays its billing vendor to bill for Verizon's transit services.³⁷⁰ Verizon's proposal to AT&T also allows Verizon to stop providing transit service for such traffic after a transition period of 60 days.³⁷¹ Under Verizon's proposal to WorldCom, Verizon would be permitted to stop providing WorldCom's transit service once it exchanges transit traffic with any carrier exceeding a DS-1 level.³⁷² Consistent with its position under Issue I-4, for direct end office trunking of tandem traffic exchanged between the petitioners

³⁶² See *id.* at 44.

³⁶³ See *id.* at 41-42.

³⁶⁴ See *id.* at 42.

³⁶⁵ See Verizon NA Brief at 34, quoting 47 U.S.C. §251(a)(1).

³⁶⁶ See *id.* at 34.

³⁶⁷ See *id.* at 34.

³⁶⁸ See *id.* at 37.

³⁶⁹ See *id.* at 37; Tr. at 2265.

³⁷⁰ Tr. at 2288-90.

³⁷¹ See Verizon's November Proposed Agreement to AT&T, § 7.2.4.

³⁷² See Verizon's November Proposed Agreement to WorldCom, Part C, Interconnection Attach., § 11.4.

and Verizon, Verizon contends that a DS-1 level of traffic is an appropriate threshold at which AT&T and WorldCom should implement direct trunks for traffic they exchange with third-party carriers. Verizon states that it needs to limit the amount of traffic at its tandems resulting from such transit traffic.³⁷³ Furthermore, Verizon suggests that the petitioners merely seek to avoid the burdens of negotiating and implementing direct interconnection with third-party carriers. Verizon states that requiring the petitioners to interconnect directly with third-party carriers at the DS-1 level provides an appropriate incentive to begin interconnection negotiations with third-party carriers.³⁷⁴

114. Verizon also objects to WorldCom's proposed language requiring Verizon to act as billing intermediary for transit traffic WorldCom exchanges with third-party carriers.³⁷⁵ According to Verizon, although AT&T did not propose similar language, its testimony indicates that it expects Verizon to perform similar billing functions for AT&T's transit traffic.³⁷⁶ Verizon argues that nothing in the Act requires it to provide such a service.³⁷⁷ Furthermore, Verizon argues that requiring it to provide such a billing function contravenes the petitioners' own duties to establish reciprocal compensation arrangements with other carriers.³⁷⁸ Verizon adds that nothing in WorldCom's proposed contract language protects Verizon in the event a third-party carrier charges Verizon a reciprocal compensation rate that differs from the rate Verizon and WorldCom charge each other.³⁷⁹ Verizon contends that, because no Verizon customer is involved when Verizon transits traffic, it is manifestly unfair for Verizon to become involved in disputes over compensation between WorldCom and third-party carriers, or for Verizon to bear any losses as a result of such disputes.³⁸⁰ Verizon contends that its proposed contract language to both petitioners provides them with appropriate incentives to establish suitable business relationships with third-party carriers, and protects Verizon from acting as a billing and collection agent on their behalf.³⁸¹

c. Discussion

³⁷³ See Verizon NA Brief at 35.

³⁷⁴ See *id.* at 36-37.

³⁷⁵ See *id.* at 38.

³⁷⁶ See *id.* at 41, citing Tr. at 2191.

³⁷⁷ See *id.* at 39.

³⁷⁸ See *id.* at 39.

³⁷⁹ See *id.* at 40.

³⁸⁰ See *id.* at 40.

³⁸¹ See *id.* at 41.

115. We adopt Verizon's proposal to AT&T, with the following modifications.³⁸² For traffic above the DS-1 threshold, AT&T has not demonstrated that the additional charges Verizon may apply to this transit traffic are impermissible. Given the absence of Commission rules specifically governing transit service rates, we decline to find that Verizon's additional charges are unreasonable. We also find that Verizon's proposed 60-day transition period is reasonable, providing AT&T adequate time to arrange to remove its transit traffic from Verizon's tandem switch once the traffic meets the DS-1 threshold. We determine, however, that Verizon's language allowing it to terminate tandem transit service after this transition period at its "sole discretion" is not reasonable.³⁸³ This provision creates too great a risk of service disruption to AT&T's end users. Moreover, we are concerned that Verizon's proposal creates uncertainty and would be unworkable, because it puts Verizon in the position of determining whether AT&T has used "best efforts" and whether it has been unable to reach an agreement "through no fault of its own." We are thus concerned that Verizon's proposed language could lead to further disputes between the parties. Furthermore, we decline to adopt Verizon's proposal to the extent it envisions the Commission essentially arbitrating a competitive LEC-to-competitive LEC interconnection agreement.

116. We thus reject the sentence in section 7.2.4 beginning with "At the end of the Transition Period, Verizon may, in its sole discretion" and ending with "then Verizon will not terminate the Transit Traffic Service until the Commission has ruled on such petition." Instead, we direct the parties to insert language directing AT&T, as soon as it receives notice from Verizon that its traffic has exceeded the DS-1 cut-off (i.e., as soon as what Verizon calls the transition period begins),³⁸⁴ to exercise its best efforts to enter into a reciprocal telephone exchange service traffic arrangement with the relevant carrier, for the purpose of seeking direct interconnection. This language should make clear that Verizon may use the dispute resolution process if it feels that AT&T has not exercised good faith efforts promptly to obtain such an agreement. We find that these modifications are not burdensome to Verizon. Verizon will be adequately compensated because it may levy its trunk and billing charges for the tandem transit service it provides during the time that AT&T negotiates with the other carrier. Moreover, any extension of Verizon's tandem transit offering would be limited, as Verizon would be able to terminate this offering if AT&T is ultimately found through the dispute resolution process not to be exercising its best efforts to obtain an agreement.

³⁸² Specifically, we adopt, without modification, Verizon's November Proposed Agreement to AT&T, §§ 5.7.5.5 and 7.2.1, 7.2.2, 7.2.3, 7.2.6, 7.2.8. We adopt § 7.2.4 with the modifications described herein. We do not address § 7.2.7 here, which is the subject of Issue V-16 below.

³⁸³ See Verizon's November Proposed Agreement to AT&T, § 7.2.4.

³⁸⁴ To remove ambiguity in this language and to remain consistent with our determination for Issue I-4, we modify Verizon's language specifying the measurement of the DS-1 threshold of traffic. We amend Verizon's proposed threshold from "one (1) DS-1 and/or 200,000 combined minutes of use ... for any three (3) months in any consecutive six (6) month period or for any consecutive three (3) months" to "200,000 combined minutes of use ... for any consecutive three (3) months." See Verizon's November Proposed Agreement to AT&T, § 7.2.4. See also *supra*, Issue I-4.

117. We reject AT&T's proposal because it would require Verizon to provide transit service at TELRIC rates without limitation.³⁸⁵ While Verizon as an incumbent LEC is required to provide interconnection at forward-looking cost under the Commission's rules implementing section 251(c)(2),³⁸⁶ the Commission has not had occasion to determine whether incumbent LECs have a duty to provide transit service under this provision of the statute, nor do we find clear Commission precedent or rules declaring such a duty. In the absence of such a precedent or rule, we decline, on delegated authority, to determine for the first time that Verizon has a section 251(c)(2) duty to provide transit service at TELRIC rates.³⁸⁷ Furthermore, any duty Verizon may have under section 251(a)(1) of the Act to provide transit service would not require that service to be priced at TELRIC.

118. For the reasons provided below, we reject Verizon's proposal to WorldCom.³⁸⁸ Verizon's proposal to WorldCom allows Verizon to terminate transit service for transit traffic exceeding the level of 200,000 minutes of use in one month. Unlike Verizon's proposal to AT&T, its proposal to WorldCom does not provide a transition period during which WorldCom would be able to form an alternative interconnection arrangement before Verizon stopped providing transit service. Furthermore, Verizon's proposal to WorldCom does not suspend Verizon's ability to terminate transit service if WorldCom is unable, through no fault of its own, to form an alternative interconnection arrangement. We find that Verizon's proposal, which gives it unilateral authority to cease providing transit services to WorldCom, creates too great a risk that WorldCom's end users might be rendered unable to communicate through the public switched network. The Commission has held, in another context, that a "fundamental purpose" of section 251 is to "promote the interconnection of all telecommunications networks by ensuring that incumbent LECs are not the only carriers that are able to interconnect efficiently with other carriers."³⁸⁹ In this instance, allowing Verizon to "terminate" transit service abruptly, with no transition period or consideration of whether WorldCom has an available alternative, would undermine WorldCom's ability to interconnect indirectly with other carriers in a manner that is inconsistent with the "fundamental purpose" identified above. Moreover, such a result would put new entrants at a severe competitive disadvantage in Virginia, and would undermine the interests

³⁸⁵ See AT&T's November Proposed Agreement to Verizon, § 7.2.1-7.2.3.

³⁸⁶ See *Local Competition First Report and Order*, 11 FCC Rcd at 15844, para. 672; 47 C.F.R. §§ 51.501, 51.503(b)(1).

³⁸⁷ See *supra*, Introduction (discussing the Commission's delegation of authority to the Bureau to conduct this arbitration).

³⁸⁸ See Verizon's November Proposed Agreement to WorldCom, Part C, Interconnection Attach., § 11 *et seq.*

³⁸⁹ *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, Fourth Report and Order, 16 FCC Rcd 15435, 15478, para. 84 (2001) (*Collocation Remand Order*), *aff'd sub nom. Verizon Telephone Cos. v. FCC*, Nos. 01-1371 *et al.* (D.C. Cir., decided June 18, 2002) (*Verizon v. FCC*).

of all end users in connectivity to the public switched network.³⁹⁰ Thus, we decline to adopt Verizon's proposal to WorldCom.

119. We also reject WorldCom's proposal to Verizon.³⁹¹ Like AT&T's proposed language, WorldCom's proposal would require Verizon to provide transit service at TELRIC rates without limitation. WorldCom's proposal would also require Verizon to serve as a billing intermediary between WorldCom and third-party carriers with which it exchanges traffic transiting Verizon's network. We cannot find any clear precedent or Commission rule requiring Verizon to perform such a function. Although WorldCom states that Verizon has provided such a function in the past, this alone cannot create a continuing duty for Verizon to serve as a billing intermediary for the petitioners' transit traffic. We are not persuaded by WorldCom's arguments that Verizon should incur the burdens of negotiating interconnection and compensation arrangements with third-party carriers. Instead, we agree with Verizon that interconnection and reciprocal compensation are the duties of all local exchange carriers, including competitive entrants.³⁹² Accordingly, we decline to adopt WorldCom's proposal for this issue.

120. Having rejected both the Verizon and WorldCom proposals to each other for this issue, we exercise our discretion under the Commission's rules to adopt language submitted by neither party.³⁹³ We find that the language Verizon has proposed to AT&T, with the modifications discussed above, represents a reasonable approach for WorldCom's transit traffic as well. Indeed, during the hearing, Verizon's witness indicated that Verizon would be willing to offer its AT&T proposal to WorldCom as well.³⁹⁴ For the reasons explained above, we find that this proposal allows WorldCom to exchange transit traffic with third-party carriers with some measure of protection against the service disruption that could result from Verizon's termination of its transit service. Verizon's proposed language is the most consistent with the Commission's rules and the Act. Accordingly, we adopt the modified Verizon proposal to AT&T with respect to WorldCom.³⁹⁵

121. Although we adopt Verizon's language, we emphasize that Verizon's proposed terms for transit service should not be interpreted or applied to restrict the petitioners' rights to access UNEs. (These network elements could include, for example, tandem switching and

³⁹⁰ As the Commission has recognized, "increasing the number of people connected to the telecommunications network makes the network more valuable to all of its users." *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, FCC 97-157, 12 FCC Rcd 8776, 8783 para. 8 (1997).

³⁹¹ See WorldCom's November Proposed Agreement to Verizon, Attach. I, § 4.8 *et seq.*, and Attach. IV, § 10 *et seq.*

³⁹² See Verizon NA Brief at 34, 39-40.

³⁹³ See 47 C.F.R. § 51.807(f)(3).

³⁹⁴ See Tr. at 2256.

³⁹⁵ See Verizon's November Proposed Agreement to AT&T, § 7.2.

interoffice transport.³⁹⁶) Verizon's testimony indicates that there is currently no tandem switching UNE in service in Virginia, or for that matter in any of the 14 Verizon East states.³⁹⁷ We note, however, that Verizon has not argued that competitive LECs should be prevented from using UNEs to exchange transit traffic with third-party carriers. To avoid such a result, we remind the parties of the petitioners' rights to access UNEs independent of Verizon's terms for transit service. Furthermore, we caution Verizon not to apply its terms for transit service as a restriction on the petitioners' rights to access UNEs for the provision of telecommunications services, including local exchange service involving the exchange of traffic with third-party carriers.

7. Issues III-3, III-3-A (Mid-Span Fiber Meet-Point Interconnection)

a. Introduction

122. Verizon seeks language that would subject the implementation of fiber meet-point interconnection to the mutual agreement of the parties. AT&T and WorldCom oppose inclusion of this language, arguing that Verizon's consent should not be a precondition to the implementation of fiber meet-point interconnection. They propose language that would give them the sole right to determine whether and where to use fiber meet-point interconnection, subject to the limitations of technical feasibility. Verizon objects to the petitioners' proposals on the grounds that meet-point interconnection raises issues requiring joint coordination, including cost apportionment for the mid-span meet. Verizon also objects to AT&T's proposed language subjecting the implementation of a mid-span fiber meet to a 120 day timeline. We adopt, with slight modification, AT&T's proposed language – for both AT&T and WorldCom.

b. Positions of the Parties

123. AT&T proposes language that would require the establishment of a mid-span fiber meet at AT&T's election without Verizon's consent.³⁹⁸ AT&T argues that it has the right to interconnect with Verizon using any technically feasible method, including fiber meet-point arrangements.³⁹⁹ AT&T adds that interconnection via a meet-point arrangement is unarguably a technically feasible method of interconnection, explicitly having been endorsed by the Commission.⁴⁰⁰ Furthermore, AT&T states that its right to choose the point of interconnection gives it the right to choose the location of a fiber mid-span meet, including the fiber splice and

³⁹⁶ See AT&T Brief at 34. See also 47 C.F.R. § 51.319(c) and (d).

³⁹⁷ See Tr. at 2237, 2274. The Verizon East states include the 14 states served by Bell Atlantic prior to the merger of Bell Atlantic and GTE. See *id.* at 2274.

³⁹⁸ See AT&T's November Proposed Agreement to Verizon, Sch. 4, Part B, § 1.6.2.

³⁹⁹ See AT&T Brief at 40.

⁴⁰⁰ See *id.* at 41, citing 47 C.F.R. § 51.321(b)(2) (listing meet-point arrangements as a technically feasible form of interconnection).